

### **REMARKS**

The Office Action dated July 20, 2006, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 6-8, 10, 19, 24-34, and 38-40 have been amended to particularly point and distinctly claim the invention. Claims 44 and 45 have been added. No new matter has been added, and no new issues are raised which require further consideration and/or search. Claims 20-23 have been cancelled. Claims 1-19 and 24-45 are submitted for consideration.

The Office Action also alleged that, “wherein the first server provides the service in a single service stream to the at least one each second server to be then provided for the plurality of client devices redirected to the at least one second server to some of the plurality of client devices,” as recited in claims 1, 24 and 34, has not been found in the detailed description of the invention. Applicants submit that paragraph 0028 of the specification discloses that the main server transfers or redirects some users into additional servers; the main server now has a much smaller number of users (mainly other servers). Paragraph 0031 of the specification also discloses that the main server has now created a distributed server tree with one or more branch servers and a lot of users having a SIP relationship with these branch servers. Furthermore, figure 4 shows a diagram of a SIP server 40 with a large number of clients. Paragraph 0036 of the specification discloses that figure 4 shows that SIP server 40 redirects one or more clients

to SIP server 44. Paragraph 0037 also discloses that figure 5 shows a diagram of a created distributed server tree, where there is **one** link from SIP server 40 to SIP server 44 and SIP server 42, respectively, and multiple links from SIP server 44 to clients 45A-45D and from SIP server 42 to clients 46A-46C. Therefore, Applicants submit that the specification does disclose “wherein the first server provides the service in a single service stream to the at least one each second server to be then provided for the plurality of client devices redirected to the at least one second server to some of the plurality of client devices,” as recited in claims 1, 24 and 34.

Claims 1-2, 4-15, 19, 24, 26-34 and 36-43 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,167,449 to Arnold in view of “SIP Session Initiation Protocol” by Rosenberg, in view of “Dynamic Load Balancing on Web-Server Systems by Cardellini and further in view of “An Example of Using Presence and Availability in an Enterprise for Spontaneous Multiparty, Multimedia Communications” by Shim. According to the Office Action, Arnold teaches all of the elements of the claimed invention except for redirecting based on the client device location. Thus, the Office Action uses Shim, Rosenberg and Cardellini to cure these deficiencies, and to argue that a combination of Arnold, Shim, Rosenberg and Cardellini discloses or suggests all of the elements of these claims. The rejection is traversed as being based on references that neither teach nor suggest the combination of elements recited in each of independent claims 1, 24 and 34 and newly added corresponding claims 44 and 45.

Claim 1, upon which claims 2-23 depend, recites a method including receiving requests for a service at a first server from a plurality of client devices and determining to identify at least one other server to provide the service to at least some of the plurality of client device on the basis of determining that a plurality of client devices are located in particular location. The method also includes creating a resource identifier at a at least one second server. The method further includes redirecting at least some of the plurality of client devices to get the service from the at least one second server. The first server provides the service in a single service stream to each second server to be then provided for the plurality of client device redirected to the at least one second server, therefore, reducing the load on the first server and providing more efficient service to the plurality of client devices.

Claim 24, upon which claims 25-33 depend, recites a computer program embodied on a computer readable medium, the computer program causing computing device to receive requests for a service from a plurality of client devices and determine to identify at least one other server to provide the service to at least one of the plurality of client device. The computing device also determines that some of the plurality of client devices fulfill load balancing criteria for providing the service more efficiently via at least one second server and creates a resource identifier at a at least one second server. The computing device further redirects at least some of the plurality of client devices to get the service from the at least one second sever, wherein the server provides the service in a single service stream to the at least one second server to be then provided to some of the

plurality of client devices redirected to the at least one second server, therefore, reducing the load on the server and providing more efficient service to the plurality of client devices.

Claim 34, upon which claims 35-40 depend, recites a server configured to perform receiving requests for a service from a plurality of client devices and determining to identify at least one other server to provide the service to at least one of the plurality of client device. The server also performs determining that some of the plurality of client devices fulfill load balancing criteria for providing the service more efficiently via at least one second server and creating a resource identifier at a at least one second server. The server further performs redirecting at least some of the plurality of client devices to get the service from the at least one second sever, wherein the server provides the service in a single service stream to the at least one second server to be then provided to some of the plurality of client devices redirected to the at least one second server, therefore, reducing the load on the server and providing more efficient service to the plurality of client devices.

As will be discussed below, the cited prior art references of Arnold, Rosenberg, Shim and Cardellini fail to disclose or suggest the elements of any of the presently pending claims.

Arnold teaches an interface for application programs to use when seeking to interact or browse services provided on a network. The application can browse for network services without being configured with the Network Layer protocols that are

used to communicate with provider of those services. The interface is configured to access any number of service identification protocol (SIP) servers under predefined network protocols. The interface can be configured as a client to SIP servers based on several different combinations of SIPs running over different network protocols. Thus, the different SIP servers can reside in different networks connected to each other using a router and communicate with the interface using their identification and network protocols. The interface receives a request for a type of service and, in response, queries one or more of the SIP servers with which it is configured to communicate. In particular, the interface looks up the type of service in each SIP server's database of registered services. After collecting the entries in the SIP server database that have a field matching the requested service type, the interface returns the result data to the application. Therefore, the interface allows any application to browse for network services without being configured with the network protocol of a service provider.

Rosenberg teaches that the Session Initiation Protocol (SIP) is an application-layer control protocol that can establish, modify and terminate multimedia sessions. SIP can also invite participants to already existing session. A SIP entity issuing an invitation for an already existing session does not necessarily have to be a member of the session to which it is inviting. SIP transparently supports name mapping and redirection service which supports personal mobility. See at least the Overview of SIP Functionality Section.

Cardellini teaches an approach that distributed Web-server architectures use to request routing mechanisms on a cluster side. In this approach, a scheduling algorithm is used by client DNS to share load among Web-Server nodes. The algorithms are classified on the basis of system state information the DNS uses for the Web-server choice. See at least Section 4.

Shim discloses spontaneous enterprise communications (SEC) designed to support spontaneous, ad-hoc conferencing in an enterprise. SEC enables team members to subscribe to presence and availability state of each other and to conduct conferencing with those who are available on the fly. See at least Section A.

Applicants submit that the combination of Arnold, Rosenberg, Shim and Cardellini fail to teach or suggest the combination of elements recited in claims 1, 24 and 34. Each of claims 1, 24 and 34, in part, recites redirecting at least some of the plurality of client devices to get the service from the at least one second server, the first server provides the service in a single service stream to each second server to be then provided for the plurality of client device redirected to the at least one second server, therefore, reducing the load on the first server and providing more efficient service to the plurality of client devices. According to the present invention, as recited in claims 1, 24 and 34, the first server receives a plurality of requests from a plurality of clients. In the present invention, the first server then determines that another server is able to provide the service more efficiently to the plurality of clients. Thus, according to the present invention, the first server forwards the plurality of requests to the other server in a single

request, wherein the second server processes and responds to each of the plurality of requests.

Arnold does not teach or suggest redirecting at least some of the plurality of client devices to get the service from the at least one second server, the first server provides the service in a single service stream to each second server to be then provided for the plurality of client device redirected to the at least one second server, therefore, reducing the load on the first server and providing more efficient service to the plurality of client devices, as recited in claims 1, 24 and 34. As mentioned above, the interface of Arnold receives a request for a type of service and, in response, queries one or more of the SIP servers with which it is configured to communicate and looks up the type of service in each SIP server's database of registered services. After collecting the entries in the SIP server database that have a field matching the requested service type, Arnold teaches that the interface returns the result data to the application. As such, in Arnold the interface allows any application to browse for network services without being configured with the network protocol of a service provider. The interface of Arnold does not redirect at least some of the plurality of client devices to get the service from the at least one second server, the first server provides the service in a single service stream to each second server to be then provided for the plurality of client device redirected to the at least one second server, therefore, reducing the load on the first server and providing more efficient service to the plurality of client devices, as recited in claims 1, 24 and 34, and claims dependent thereon.

Rosenberg, Shim and Cardellini fail to cure the deficiencies of Arnold as outlined above. Specifically, Rosenberg , Shim and Cardellini fail to teach or suggest redirecting at least some of the plurality of client devices to get the service from the at least one second server, the first server provides the service in a single service stream to each second server to be then provided for the plurality of client device redirected to the at least one second server, therefore, reducing the load on the first server and providing more efficient service to the plurality of client devices, as recited in claims 1, 24 and 34. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Arnold, Shim, Cardellini nor Rosenberg, whether taken singly or combined, teaches or suggests each feature of claims 1, 24 and 34 and hence, dependent claim 2, 4-15, 19, 26-33 and 36-43 thereon.

Claims 3, 16-18, 25 and 35 were rejected under 35 U.S.C.103(a) as being unpatentable over Arnold in view of Rosenberg and Cardellini as applied to claims 1, 24 and 34 and further in view of U.S. Patent No. 6,175,869 to Ahuja. According to the Office Action, Ahuja teaches a technique for server allocation which includes dispatch mechanism for dispatching requests to servers based on the server load. Thus, the Office Action combined the teachings of Arnold, Rosenberg, Cardellini and Ahuja in an effort to yield all of the elements of claims 3, 16-18, 25 and 35. The rejection is traversed as being based on references that neither teach nor suggest the combination of elements recited in each of independent claims 1, 24 and 34, upon which claim 3, 16-18, 25 and 35 depend.




Ahuja teaches a system with a pool of replicated services that requires a mechanism for dispatching each incoming client request to an appropriate server in the pool. Claims 3 and 16-18 are dependent on claim 1; claim 25 is dependent on claim 24 and claim 35 is dependent on claim 34. Thus, each of claims 3, 16-18, 25 and 35 incorporates all of the elements of claims 1, 24 and 35. Ahuja does not cure the deficiencies of Arnold, Rosenberg and Cardellini, outlined above, with respect to claims 1, 24 and 34. Specifically, Ahuja does not teach or suggest redirecting at least some of the plurality of client devices to get the service from the at least one second server, the first server provides the service in a single service stream to each second server to be then provided for the plurality of client device redirected to the at least one second server, therefore, reducing the load on the first server and providing more efficient service to the plurality of client devices, as recited in claims 1, 24 and 34. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Arnold, Cardellini, Ahuja nor Rosenberg, whether taken singly or combined, teaches or suggests each feature of claims 1, 24 and 34 and hence, dependent claim 3, 16-18, 25 and 35 thereon.

As noted previously, claims 1-19 and 24-45 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-19 and 24-45 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Additional Claim Fee Transmittal  
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